

distal end of cylindrical base portion 216. Flange 234 is preferably a standard size such that cannulas having different sized diameter passageways formed therethrough may be formed with a flange that has the same configuration and dimension as flange 234. In this manner, cannulas of varying sized and dimensions may be interchangeably attached
5 to a given cylindrical base portion such as cylindrical base portion 216.

To facilitate the interconnectability of cannula 116 and cylindrical base portion 216, a quick connect mechanism is provided which, for example, may be by a series of engageable mating members (not shown) formed on cannula 116 proximal of flange 234 which interconnect cannula 116 with cylindrical base portion 216 by way of a
10 series of mating indented surfaces (not shown) formed along the inner wall of cylindrical base portion 216. The two elements are brought into engagement with each other by inserting the proximal end of cannula 116 into the distal end of cylindrical base portion 216 and rotating cannula 116 clockwise until the mating members engage and lock into the mating surfaces. The two elements may be disengaged by applying a proximally
15 directed force to the cannula toward cylindrical base portion 216 and rotating cannula 116 counterclockwise. This feature is particularly advantageous during manufacture and assembly of cannula assembly 112 in that it facilitates inventory management and manufacturing efficiencies due to the cylindrical base portion 216 now being a single component which is able to be utilized across multiple cannula diameter products, the
20 only difference being the cannula which is ultimately secured to the cylindrical base portions at the final stage of manufacture.

Also provided on cannula assembly 112 is a seal assembly 240 which generally includes a housing 242 and a seal member 244. A similar seal assembly is disclosed in copending PCT Application Serial No. PCT/US98/08970 filed May 1, 1998
25 by Racenet et al., the entire contents of which are hereby incorporated by reference.

As another feature, cannula assembly 112 may be provided with suture anchoring structure, for example suture anchor holes 219 on finger grips 218 or clevises 221 formed near the proximal end of cannula 116.

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In usage, as shown in FIGs. 25-28, obturator assembly 110 is inserted in the proximal end of cannula assembly 112. Obturator assembly 110 is pushed into cannula assembly 112 until the bottom of housing body 119 contacts the proximal end of cannula assembly 112. In this manner, arming button 166 of slider 156 is forced into housing body 119 thereby causing slider 156 to rotate such that legs 156a and 156b push latch 150 outwardly so that web portion 155 is out of axial alignment with ledge 134, as best shown in FIGs. 25 and 26. Thereafter, trocar assembly 100 is inserted through the body wall of the patient, FIG. 27, causing the guard member 128 to be urged proximally to reveal knife blade 125. The proximal movement of guard member 128 and shield member 126 connected thereto by shield extension 127 causes legs 156a, 156b to be rotated back inwardly by posts 135. This motion pushes legs 156a, 156b upwardly and inwardly away from latch 150 so that crooks 156d, 156e, respectively, of slider 156 no longer bias latch 150, permitting latch 150 to rest against the outer surface of ledge 134. Once the knife blade 125 and distal portion of guard member 128 pass through the body wall of the patient, the force of spring 140 causes slider 126 to move distally, thereby resetting guard member 128 by way of ledge 134 once again blocking proximal movement of guard member 128. Once guard member 128 has returned to its distal (guarded) position, it cannot be retracted again until arming button 166 is permitted to return to its distal position, *i.e.*, by releasing pressure from obturator assembly 110 to allow obturator assembly 110 to separate slightly from cannula assembly 112. Once this happens, spring 158 pushes slider 156 distally to permit legs 156a, 156b to re-engage posts 157, 159 of latch 150.

It will be understood that various modifications may be made to the embodiments disclosed herein. Therefore, the above description should not be construed as limiting, but merely as exemplifications of preferred embodiments. Those skilled in the art will envision other modifications within the scope and spirit of the present disclosure.